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16. ABSTRACT

This report reviews the literature on the potential environmental hazards and health impacts from production, distribution, and use of asphalt, the essentially uncracked residue from crude oil, and coal tar pitch, the highly cracked residue from fractional distillation of coal tar derived from the coking of coal. Topics include physical and chemical properties; production figures; uses; process descriptions; contamination potential; methods of sampling, monitoring, and analysis; acute and chronic effects on human health; toxicity to animals and plants; suggested handling practices; regulations and standards.

Of the 31 million tons of asphalt sold annually in the US, most is used in exposed surfaces: paving (78%), roofing (17%), dam linings and soil stabilizers, etc. (<5%). In contrast, 62% of the 1.2 million tons of pitch produced annually in the US is used in baked carbon and graphite products, 17% as fuel, and only 7% in exposed surfaces. Asphalt and pitch and their emissions and degradation products may contain varying quantities of trace metals and polycyclic aromatic hydrocarbons (PAH), some of which may have toxic effects including phototoxicity and cancer of skin and lungs. Potential environmental contamination and health hazards of asphalt and pitch are considered, with recommendations for further research.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Asphalt Coal tar pitch Polynuclear aromatic hydrocarbons Benzo(a)pyrene Trace metals	Pollution Environmental effects Carcinogenicity Phototoxicity	

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